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MARYLAND FISHERIES

PUBLISHED BY CONSERVATION DEPARTMENT OF MARYLAND

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INVESTIGATION OF DREDGING ROCKS

IN ORDER TO DETERMINE the condition of the oysters as to quality, quantity, etc., on the oyster dredging bottoms of of the Bay, the Department engaged the schooner H. M. Rowe, in charge of Captain W. C. Todd, to make a careful investigation of the rocks. This vessel, equipped with dredges, started work on October 9th, examining the oyster rocks at Hoopers Straits and New Discovery. The results of the first day's work showed the average catch at Hoopers Straits would be 30 bushels per day, and at New Discovery, 50 bushels per day.

On October 10th, Commissioner Swepson Earle, with Chief Inspector E. O. Townsend and Chief Clerk H. H. Johnson, met the boat and the members of the Advisory Committee, John T. Handy, Herman A. Woodfield and Robert S. Harrison, at Solomons with the Steamer DuPont, which accompanied the schooner Rowe on all the rest of the tests.

On the morning of the 10th, the bars at Hog Island, Cove Point, Cedar Point and Barren Island were tried. The results were not particularly encouraging; on Hog Island about ¼ of a bushel of oysters were caught in four dips, and there were no oysters of this year's spawning, and very few of last. There seemed to be plenty of shells, however.

On Cove Point three dips of the dredge brought up only a dozen marketable sized oysters. Very few shells or small oysters were found.

Two dips made on Barren Island brought up about two dozen oysters and no shells. Shells seem to be needed on this bar.

Messrs. Earle, Johnson and Townsend, as well as the members of the Advisory Committee, were present on the dredge boat throughout the testing of the following bars, and their report is as follows:

Governor's Run—Five dips, 6 dredges; quantity: ½ bushel of oysters after culling with 50% small, two years' spat and shells. There were more than twice as many shells as oysters, but the quality of the oysters was good.

Dare's Wharf—Three dips, 6 dredges (4 full of shells and oysters) about 2 bushels of oysters, 1¼ bushels of which were large and ¾ bushel small. Good condition. Small oysters seem to be about two years old.

Plum Point—One dip, 1 dredge (full). Culled 4 bushels of shells and 1 peck of oysters. Percentage half large and half small. Condition, good. No spat of this year noticed.

Hog Bar (above Chesapeake Beach)—Two dips; 4 dredges, (dredges about ¼ full of oysters and shells). Quantity, about 1/3 bushel large and small oysters.

The DuPont and the schooner Rowe anchored at night in Herring Bay.

While at Hog Bar, the shells planted two years ago were tested. Three dips of three dredges were made. Each dredge showed more young growth than had been found so far, about one peck of oysters to a dredge.

On October 11th, the following bars were tried:

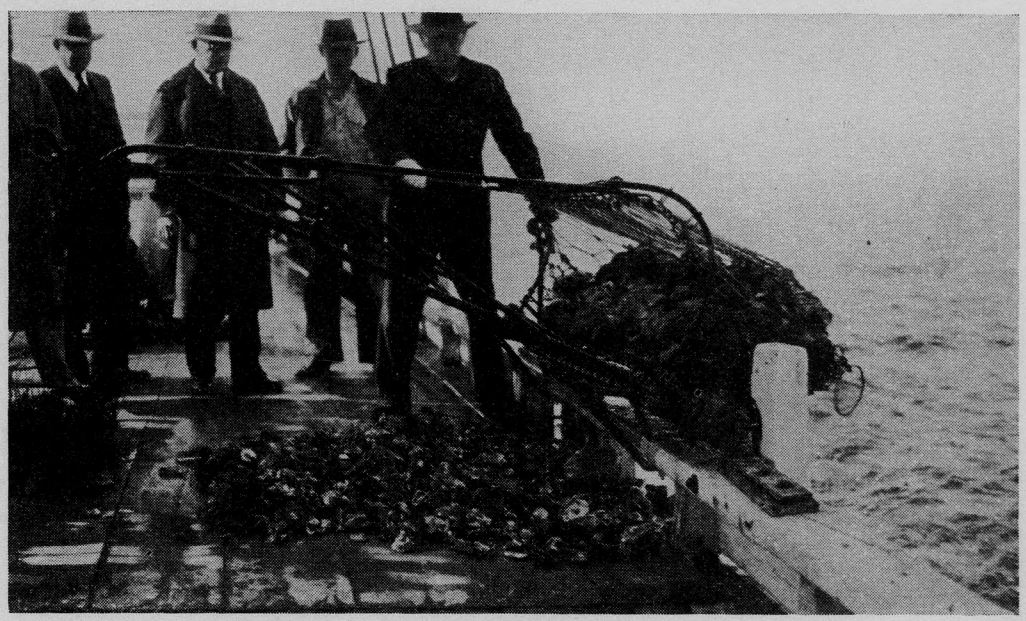
Parker's Rock—Eighteen dips, 18 dredges. Dredges were filled with about 4 bushels of oysters and shells. All except those on Lower and Center Middle Rock were in healthy condition. The upper Bay oysters which had been planted there are thriving. Shells placed on this rock show a good catch of 1½ to 2½ inch oysters. Dredges run equal in shells and oysters.

Parker's Rock (outside of 3 Sisters Bar)—One dip, 1 dredge; (came up not filled). About 15% oysters, a few dead; run about 50% large and small oysters.

Kent Point—Two dredges not filled, about 15% of oysters and 85% shells; not many small ones; one peck of large oysters found.

Brick House (Kent shore)—One dredge hauled in containing about 60% oysters and 40% shells. About 3 pecks of good small oysters. 1 peck of small oysters found dead; ¼ peck good large oysters. These oysters were planted from the head of the Bay in the springs of 1932 and 1933. Some mortality among those transplanted.

Broad Creek (Kent shore)—Four dredges, 1/3 oysters. Quantity: 1½ bushels of oysters ranging from 2 to 2½ inches, 1 peck large oysters. No mortality noted on this rock.



A Full Dredge—Sandy Point Bar

Messrs. Handy and Harrison left with Captain George O. Haddaway for Clairborne.

Love Point—Two dredges (full); lower part were oysters transplanted in the spring of 1932, and showed 25% oysters and 75% shells. A quarter of a peck of large oysters, ½ bushel of small oysters and ⅛ of a peck of oysters found dead.

One dip each was made on Broken Bottom and Main Bar. No mortality was found. Shells and small oysters scarce. About an average of one peck of large oysters was found on each bar.

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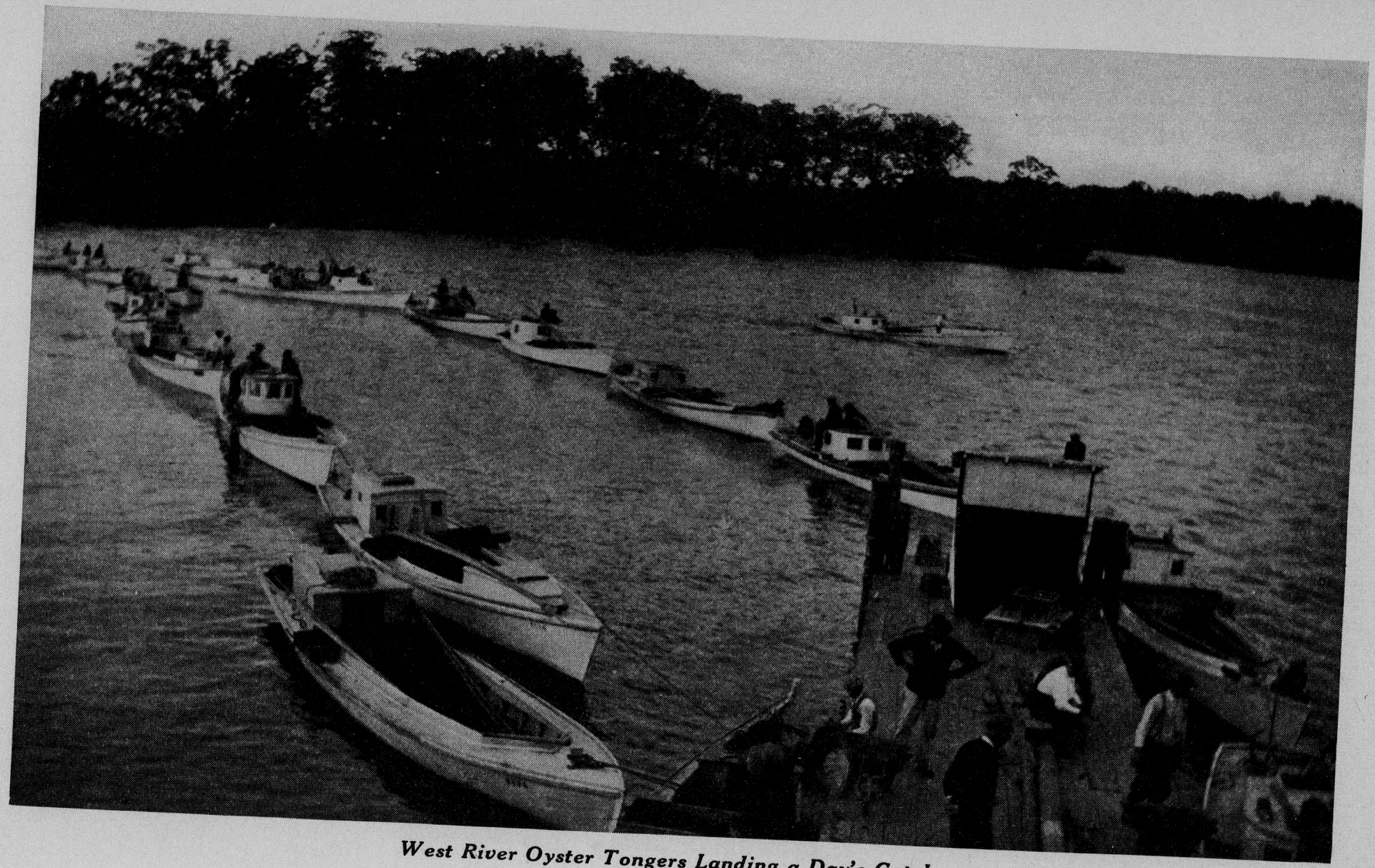

West River Oyster Tongers Landing a Day's Catch

Sandy Point—Five dips; no mortality noticed. Percentage, 60% shells, 40% oysters; size 25% merchantable and 75% unmerchantable. About 1½ bushels of oysters to two dredges.

Snakes Rip—Two dips, dredges full. More oysters found on this bar than on any one tried so far. 85% oysters, 15% shells. About 10% of the oysters were small. No mortality. Condition good.

Belvedere Shoals—One dip, dredge filled with shells and oysters. Percentage 35% oysters, 65% shells. Size, 10% merchantable. No mortality. Condition good.

Man O'War Shoal—One dip, dredge full. Twenty-five per cent oysters and 75% shells. No mortality observed and not much "green," meats fat.

Teatable—Two dips, 2 dredges. No mortality, 98% oysters, 2% shells. Not much "green" and condition fat.

Hodges—Two dips, 2 dredges full. Same condition as Teatable, except that oysters were large.

Tolchester Beach—Two dips, 2 dredges full. Same condition as Teatable.

Flat Rock—Two dips, 2 dredges full. Same as Teatable.

Nine Foot Knoll—Ten dips. Tested rocks where 16,000 bushels of seed oysters were planted in April of this year from the upper Bay seed area. They were found in a healthy growing condition. No mortality among plants like condition found at Love Point and Parker's Rock. Other oysters vary in size, but scarce. Caught about 10 bushels in all, including shells. Greater percentage of oysters than shells.

Seven Foot Knoll—Two dips, 3 bushels of oysters and shells. Percentage 75% shells and 25% oysters. Size of oysters was 60% large.

It was the opinion of Captain Todd that the bars from No Point Bar to Cedar Point would average 95 bushels per day; from Cedar Point to Cove Point, 50 to 75 bushels a day and Dare's Wharf, 100 bushels per day.

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LATE RUN OF CRABS PROVES BOON TO SHORE

Tilghmans, Md., October 29, (*Associated Press*).

Last week saw the greatest run of crabs in Talbot County waters for many years. Watermen made from $10 to $15 a day. Several large packing houses were in full operation.

During the summer months crabs were unusually scarce and the watermen suffered as a consequence. But about September 1, they began to appear in large numbers. So high have been the profits since then that few of the watermen have turned their attention to the oyster beds, though almost two months of the tonging season have passed.

Early last week the crab market was glutted after the discovery of a large school near Matapeake. Boats from all sections of the bay made record catches off the Kent Island shore and the price for crab meat dropped from 1½ cents to 1 cent a pound.

CLOSING OF TONGING BARS BENEFICIAL

IN the September issue of MARYLAND FISHERIES was printed a list of the oyster bars (5,030 acres in all) which were closed until November 1, by request of the tongers in the several districts of tidewater Maryland. The additional rest period given these bars during the present season has aided them very materially, and had it not been for the poor market (due to warm weather) existing at the time the bars were reopened, the tongers would have reaped a harvest.

A report from Deputy Commander J. G. Ruth of Grasonville, Maryland, makes the following statement:

"On Hood's Point there were 55 tonging boats and they averaged 40 bushels to a boat.

"On Poplar Point there were 30 boats and they averaged 35 bushels to a boat.

"On Jones Hole there were 20 boats that averaged 30 bushels to a boat, and all of the bars had very fine stock, but the market for these oysters was very slack. We have any quantity of small oysters."

Similar conditions were reported in Talbot and Anne Arundel Counties, where certain bars were closed in response to a request from the local tongers. It is believed that the oyster-

men, seeing the benefits to be derived from this closing, will ask permission to set aside areas in every county of the State, in order that the small oysters may have a better chance to grow and the large ones may be protected until later in the oyster season when the demand, and, consequently, the prices are better.

DEPARTMENT EXTENDS TIME LIMIT FOR OBTAINING DREDGE LICENSES

OWING to the heavy losses sustained by the watermen of Maryland generally as a result of the hurricane which swept the Chesapeake during the latter part of August, the Department decided, at the beginning of the oyster season, in order to prevent any hardship among the tongers, to permit these oystermen to work without a license for a certain period until they could earn enough money to purchase the license.

At that time it was felt that a demand would come from the dredgers for similar relief, inasmuch as the cost of equipping a dredge boat for the season and cost of license would far exceed the outlay required of the tonger.

Accordingly, the Department decided to allow the dredgers to work for a period of thirty days without license, at the end of which time license would be required. The following letter was, therefore, sent to every Deputy Commander and Inspector in the Department's service:

"October 28, 1933.

"TO ALL DEPUTY COMMANDERS AND INSPECTORS:

"*Subject*: DREDGING LICENSES.

"It has been decided that a period of thirty days will be extended to dredgers to work without a dredging license, but at the end of this period, they must either apply for a license or have secured it.

"Before any one is eligible for this concession, it will be necessary that he make application to this Department personally or through you. In doing so he will then pledge himself to secure a license at the end of the thirty-day period.

"If any one sincerely wants this relief and is willing to co-operate with the Department in furnishing it, there should not be any difficulty in having him sign a note or such other agreement as will be sent you for that purpose. Forms will be sent you on Monday which will be:

"1. AN APPLICATION to be made out by the captain, if the captain has a crew on wages; or by the captain and each member of the crew, if he operates on shares.

"2. The AGREEMENT or NOTE, to be executed in a similar manner, that is, the captain's signature is all that will be required if he pays his crew wages, but the captain and each member of the crew must sign, if they operate on shares.

"Of course, the captain is the only one who gets the license and not the crew, but at the same time, we think it will be easier for the crew to understand, if they work on shares, why they are prohibited from dredging at the end of the thirty-day period.

"We will allow an additional five days grace for the consummation of these agreements. Therefore, the end of the period will be December 5th.

"After this date, any boats which are not licensed or have not complied with the terms of their agreement, will have to be sent ashore and not permitted to operate until a license has been secured.

"This extension of time applies not only to the Bay dredgers but to the scrapers in the tributary waters of Talbot, Dorchester and Somerset Counties.

"Yours very truly,
"SWEPSON EARLE,
"Commissioner."

INLET SALTS WORCESTER COUNTY BAYS

IN the last issue of MARYLAND FISHERIES, published shortly after the August storm, which caused so much erosion, mention was made of the fact that the storm cut away Sinepuxent Beach sufficiently to make an inlet between the Atlantic Ocean and Sinepuxent Bay. The second storm, which visited this part of the coast, widened the inlet. When the Conservation Commissioner visited Ocean City in October, and accompanied

by Mayor William B. McCabe, inspected Assawoman, Sinepuxent, Newport and the upper part of Chincoteague Bay to check up on the density of the water since the creation of the new inlet, it was surprising to find how salty the water has already become, even in Assawoman Bay, north of Ocean City, as well as down in the Chincoteague far below South Point. Clams, which were thin and would probably have died within six months, showed a marked improvement, and, in fact, were getting fat since the advent of the ocean water.

New Inlet at Ocean City

Inquiries are already being received regarding the area suitable for oyster culture, not only from Worcester County but other sections of Maryland, and as soon as conditions warrant, this work will go forward and will, no doubt, be one of the most active regions of water area per square mile in the State of Maryland.

The accompanying picture, which shows the present inlet, gives an idea of the great volume of ocean water which is now coming into Sinepuxent Bay. This inlet is 1,000 feet in width and 32 feet in depth. The District Engineer of the War Department for Baltimore, Colonel E. J. Dent, has already let some of the minor contracts in connection with the permanent maintenance of this inlet by the government, which will mean so much to the citizens of Worcester County and particularly

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to the fishermen who resort to the waters off Worcester County for the catching of cod and other ocean fishes for commercial purposes.

The Conservation Department is preparing the charts necessary for the leasing work under the engineer of the department, in order that operations may start as soon after the first of the year as possible.

COMMENTS ON THE OYSTER SEASON

IN THE scraping area of Maryland, which includes Tangier Sound, Hooper's Straits and part of the Great Choptank River, the boats resorting to these areas have found conditions very much better than in the Chesapeake Bay. As many as seventy boats have been engaged in scraping for oysters in Tangier Sound, and the oysters caught have been fat and of excellent flavor.

In the Great Choptank River, a scraping area was opened which had been closed for two and a half years. During this closed period thousands of bushels of shells were placed on the depleted bars, and it is most encouraging to note that the scrape boats have been able to catch 150 bushels a day since the opening of this area, which is a tremendous increase over the catch there prior to the closing, which was about 25 bushels a day. The lines as now buoyed and worked by scrapers in Great Choptank River are as follows:

North and east of a line drawn from the Sinclair dwelling, situate between Upper Bar Neck Beacon and Lower Bar Neck Point on Tilghman's Island to Benoni's Lighthouse and thence to Chlora Point, Grand Neck, in Talbot County; and also in the waters above and east of a line drawn from Howell's Point in Talbot County to Horn Point in Dorchester County.

The tongers working off Cambridge had a reserved area opened on the first of November, where more than 5,000 bushels of oysters from the polluted zone were transferred last spring. These oysters, which will now pass the regulations of the State Department of Health, are of select size and gave the tongers excellent results. Unfortunately, however, the first part of November was very warm and the oyster market

was inactive, regardless of the fact that very fine oysters were coming from Maryland waters. These oysters should have brought at least 75c. a bushel, but netted the tongers much less. In fact the low price of oysters on the tonging grounds during October prevented the watermen from making their usual livelihood. In Chester River the price got as low as 25c. a bushel, which was entirely incommensurate with the value of these oysters, which will ordinarily shuck a gallon to the bushel. Such small returns for their labors are naturally very disheartening to the watermen.

The crab season in September, and in fact during most of October, was exceedingly good, and there was a bountiful supply in the Great Choptank River and the waters of Queen Anne's County. From an Associated Press dispatch originating at Tilghmans, it was stated that watermen made as high as $10 a day crabbing, and this was immensely helpful to these people, who suffered serious losses in the August storm.

The Conservation Department has frequently pointed out the importance of sticking to the crab business as late in the fall as possible, in order that oysters need not be sacrificed on a poor market, but may be held back until the weather is colder and the demand better. It is hoped that the Oyster Code now being formulated by the industry under the N. R. A., will have a beneficial effect by preventing price cutting and assure the watermen an adequate return for their labors.

STATES OYSTER ROCKS SHOW LITTLE SPAT

A brief report from Dr. R. V. Truitt, who carried on his usual observations in the Chesapeake this summer, indicates that the oyster catch this year throughout the bay was negligible. Except for Jersey, he reports, this also applies up and down the coast to Carolina, with minor exceptions. A catch of small proportions was experienced on the State Experimental Area in Honga River, and light catches were also found in the region east of Parsons Island in Eastern Bay and in the lower Chester River section. The rocks in the bay proper show no spat whatsoever, and Dr. Truitt states that what are being called "catch," "heavy spat," etc., in the State waters really represent one and two—mostly the latter—year old stock.

MARYLAND FISHERIES

PUBLISHED BIMONTHLY BY CONSERVATION DEPARTMENT,
SWEPSON EARLE, Commissioner.

No. 25 BALTIMORE, MARYLAND November, 1933

TRANSFER OF SEED AS PUBLIC WORKS PROJECT

EARLY in October it was deemed wise to make a careful investigation of the oyster bars of Chesapeake Bay, in order that first-hand information could be given the dredge boat owners and captains prior to placing their vessels in commission for the dredging season, which started November 1.

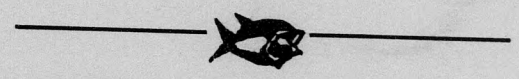
Accordingly, Captain W. C. Todd, with his schooner the *Rowe*, was engaged for this purpose and the report of the investigation is set forth in detail elsewhere in this magazine. The results showed conclusively that most of the dredging rocks south of Sandy Point were in poor condition to offer the dredgers a season's work.

Parker's Rock, which is one of the most prolific and largest on the Western Shore was found to be well-stocked with small oysters, most of which caught on the shells planted there the season before last. These oysters, however, were too small for marketing this year.

The great seed area above Sandy Point was found to be bountifully supplied with oysters, unfortunately too small to pass the cull law, but so thick as to prevent proper development. The Conservation Commissioner feels that it would be wise to transplant half a million bushels or more of this seed to bars adjacent to Calvert County, where one great planting could be properly guarded, and where the oysters, after maturing, would furnish a fine livelihood for the watermen.

It is estimated that the cost to carry out this work would be around $45,000. It would give employment to 250 men and approximately 50 dredge boats for a period of six weeks. Then, after the oysters had matured, as many dredge boats or more could be employed for an equal period catching the oysters, and the many packing houses both in Baltimore and throughout the State would be supplied with select oysters.

The Commissioner took this up with Mr. Abel Wolman, engineer for the Public Works Administration in this State, endeavoring to have the Government assist the State in this operation. Up to this time no action has been taken on the request. However, the commissioner has not given up hope, and is endeavoring to work out a plan to take advantage of the Government's offer to allow 30% of the cost of any public works project, which, with the $15,000 available from State funds for the transfer of seed oysters, would only require $16,500 to put it across, and would be most helpful to the dredgers and the oyster industry of the State at this time.



WHAT THE OCEAN CITY INLET MEANS TO MARYLAND

A PERMANENT inlet to salt the bays of Worcester County has long been the dream of the citizens of this county and many others interested in seeng an increase in the oyster supply of the State. In 1907, under the direction of the Shell Fish Commission, a survey was made of the waters of Worcester County, following the introduction of ocean water which washed through the beach and added salt to the water of the bays at a crucial time when oysters were spawning. The result was a great growth of young oysters on some of the old shell bars, which made a survey in those waters advisable.

The effects of the salt water were soon lost in these bays and the oysters never developd beyond an inch in size. They were quickly bootlegged in the lower part of Chincoteague Bay and Virginia, and even the beds were destroyed, and that ended oyster farming in Worcester County, with the exception of the lower part of Chincoteague Bay, until the inlet of 1921, which washed through about three miles south of Ocean City and continued for more than six years. This inlet was used by the watermen to go in and out of the ocean after it first cut through, but it gradually filled up with sand and became impassable for navigation, and then entirely closed.

During the period when this inlet was open, however, oyster farming was very successfully carried on, even in Assawoman Bay, north of Ocean City. Clams developed on the sand bars, and crabs, which were scarce in Chesapeake Bay at that time, became so plentiful as to aid very materially in supplying Crisfield, St. Michaels, Oxford, Cambridge and other important crab centers of the Chesapeake region.

The new inlet, which was cut through by the August storm of this year, will be made permanent with the aid of the United States Government. An appropriation from the State of Maryland for the erection of jetties, and maintenance by the Government, will give Maryland what it has long needed, a fast-growing salt water oyster for the shell stock trade. It will also put us in the clam business in competition with the other clamming states along the Atlantic Coast. The blue crab in these waters produces the egg sponge, and the perpetuation of this shell fish throughout the waters of Worcester County will be assured, as well as a supply to augment any fall-off in the bay region.

Commercial fishing off Ocean City will develop trawling for such ocean fish as the cod and sea trout, and Ocean City will be a shipping point for millions of pounds of fish to the important fish markets of the country. Sport fishing off Ocean City will also be possible, and this will add to the popularity of the seaside town as a summer resort. The shooting of wild ducks and geese in the fall and winter has long been an attraction of this region, and with deeper water will make the bays more accessible to sportsmen coming in boats from other states.

CHANGE IN SIZE OF DREDGES

The Conservation Department which is charged with the duty of enforcing the oyster laws, calls to the attention of all oystermen, dredgers or scrapers, Chapter 244 of the Acts of 1933, which made changes in the size and weight of the scoop, scrape or dredge to be used in taking oysters.

Heretofore the maximum size of a dredge was sixty (60) inches. This has been reduced to forty-four (44) inches in length, measurement to be from the outside tooth, with a maximum weight of two hundred (200) pounds.

Attention is also called to the provision against the "devil diver," "devil catcher" or any similar device being in possession of the captain or used on any dredge boat for the purpose of being attached to the dredge. Any one using the dredge or "devil catcher" contrary to the provisions above will, upon conviction, be subject to a fine of $50.00 and the dredge confiscated.

AUTHORITY ON POLLUTED STREAMS

THE question as to the authority the Conservation Department and the State Department of Health have when it comes to the question of pollution of streams, has finally been settled.

The Department has received an opinion from the Attorney General's office, dated October 4, 1933, which reads as follows:

"I have your letter of September 28th, requesting an opinion as to the relative power of your Department and the State Health Department in dealing with the question of the pollution of streams. Under Section 3 of Article 43 the State Board of Health is given the power to make rules and regulations regarding the character and location of drainage, water supply, disposal of sewage, garbage or other waste materials. The Conservation Department under the provisions of Section 14 of Article 39 is given the power to deal with pollution of streams, but a clause in the Section provides that 'nothing herein contained shall be deemed to alter, change, modify or restrict the jurisdiction of the State Board of Health.'

"I do not believe that there is any conflict between the powers of the two departments, since the Health Department is concerned only with the health of persons and the Conservation Department deals with preservation of fish life. The fact that the Health Department may have issued a permit to an industry certifying that the operation is not injurious to health would not prevent the Conservation Department from taking action to prevent a pollution which might be destructive to fish life."

The Department will continue to make investigations as to pollution the same as in the past and will necessarily require the cooperation of the State Department of Health in many cases of this nature, but for direct and immediate remedies in cases of pollution, the Department has full authority under Section 14 of Article 39 to take such steps as are necessary to put an end to the pollution of streams when it affects fish life.

1933 BASS FISHING SEASON

By HERBERT B. MACCUBBIN, *President, Sportsman's Chapter No. 5, Izaak Walton League of America.*

BASS FISHING during the 1933 season has been most gratifying. Despite the inroads made by the netting of bass by commercial fishermen, the black bass is waging a game fight for existence in tidewater; and above tidewater, where he is protected, is more than holding his own. Wherever netting is banned by law, bass abound in Maryland waters, and in spots where no protection is afforded, but where the commercial fishermen of the vicinity realize that they make considerably more money from the bass angler than they do from the sale of bass, hence have stopped netting bass and devoted their time to renting boats and selling bait to anglers, black bass are increasing rapidly.

A fine example of this condition is the Bush river, a tidewater stream. At least once a week I have cast this beautiful body of water for bass, and the catch has always been from four to nine for half a day's sport. Pike (pickerel) and yellow perch also take the lure, and fine sport is to be had. The commercial fishermen of the Bush river section have become conservationists through actual experience.

Gunpowder and Little Gunpowder Falls have furnished the writer the finest in bass fishing this year. From the Loch Raven dam downstream a half-day of intensive angling resulted in from three to ten fighting bass, and it seems these fast-water bass are quite a bit gamier than their tidewater cousins, at least in the matter of acrobatics.

That old muddy Monocacy still offers sport for small-mouth bass anglers, and in and around Seneca live bait fishermen have had considerable so-called "luck." Some have been taken on lures, but the live minnow seems to claim all records in this stream.

The Potomac river at Fenwick, across from Gunston's Cove, is a real bass fishing spot, and here I have found the best bait for casting is a white bucktail with spinner. For flyrod, again, a white bucktail with spinner seems the most tempting.

The Susquehanna, below the Conowingo dam, offers superb bass fishing with the added thrill of hooking into a wall-eyed

pike, a large perch, crappie or even an occasional rock. Above the dam small-mouth bass are really plentiful around the rocky ledges and bottoms, and above the first bridge some fine large-mouth bass have been taken. A few bass have been taken in the Middle River section, but only enough to indicate that bass are coming back despite the terrific drought of several years ago, which killed so many.

The Patapsco and its branches offer both large and small-mouth bass fishing, particularly in Carroll County near the Sportsman's Chapter No. 5, Izaak Walton League clubhouse.

Eastern Shore mill-ponds still hold their place in the affections of many bass fishermen, with the exception of the one at Preston and a couple of others where the dams gave away during the last year.

The foregoing completes my bass fishing experience thus far this season, but I should add a few comments regarding baits, etc. At Bush river, from the railroad bridge up, bass fishing is excellent. The best artificial bait I have found for this section is an L-Y spoon or a spinner and pork rind. Other anglers have used the small green and white minnow with spinner to advantage. Understand, bass are *all over* the Bush River, and I have caught them both along the shore line and in mid stream, the best days resulting from casting along the grassy bottoms offshore. Manipulation of bait, while being retrieved is, I believe, the most important factor in the catching of bass. A jerking, twitching, now-fast-now-slow, bait is certainly a more natural looking small fish or bug than one making a straight bee-line for somewhere.

I have caught bass in the two Gunpowders, from the Philadelphia road to Loch Raven, every one on either a spinner and bucktail or pork rind bait, or a standard plug, any color doing the work. In the Monocacy, take your choice of artificial baits, as live minnows do a better job there. The Potomac bass do not differ greatly from the Bush River bass, except they seem to prefer a white bucktail with spinner, the L-Y spoon running a close second. I personally like a plug for Susquehanna fishing, although I have taken many bass on both spoon and spinner baits.

In the Conowingo Lake, I prefer a No. 1 L-Y spoon or a spinner bait, but here, you *must* know the spots, for the bass do not seem to travel any soft bottoms of Lake Conowingo, but they are there and also have grown large. There are some fine pickerel in the lake, and they take the lure with fury!

Eastern Shore mill-pond bass seem to prefer dark, darting plugs, although the largest bass I ever caught (at Parker's mill-pond) was taken on an orange bucktail with spinner. They also take the L-Y.

A well organized restocking program, plus the banning of commercial netting of bass in Maryland, will result in the waters of this State becoming an attraction to hundreds of non-resident anglers, the same as our large rainbow trout reputation brings hundreds of out-of-State anglers to Maryland each spring. I prefer that all stocking be directly supervised by the Conservation Department.

Boats at Bush River usually must be reserved several days in advance, so it is readily seen that at one dollar a day the average Bush River commercial fishermen takes in from five dollars and upwards per day. The "upwards" standing for the maximum number of boats he has available, for they are always rented if available.

Give Maryland bass a chance to propagate undisturbed, and we will have the best bass fishing north of Florida.

SPEECH BEFORE CHESAPEAKE BAY AUTHORITY

By SWEPSON EARLE, *Conservation Commissioner*
October 6, 1933

MR. CHAIRMAN and gentlemen, it is a great pleasure to see my colleague of the Chesapeake Bay Region, Commissioner Richard Armstrong, of Virginia, here this morning. In a letter I received from Commissioner Armstrong, he feared he would not reach Baltimore before this afternoon, which would have been too late for this discussion. I feel sure that this group has been benefitted by the remarks of Mr. Armstrong, dealing especially with the lower section of Chesapeake Bay, and I am delighted that the Commissioner of Virginia feels as I do when dealing with the fisheries of this great region, because fish and crustacean life are migratory throughout the entire bay, and we must do our part to give them protection and make the bay safe for their existence.

I regret that I was delayed and did not hear all of Doctor Higgins' remarks on the fishery interests of the Atlantic Coast.

Conservation Exhibit at Hagerstown Fair

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I did hear the latter part of his paper dealing with the Chesapeake Bay and I am heartily in accord with what he has said. In my brief talk this morning I desire to deal with the Chesapeake Bay as a whole, and then discuss Maryland's part of the bay separately.

The broad waters of that great inland sea, Chesapeake Bay, belonging jointly to Virginia and Maryland, give employment to 20,687 citizens in the harvesting of sea food. In 1931 these fishermen took from the waters of the two states 180,350,820 pounds of edible sea food, which brought them an income of $7,059,380. To this may be added from the menhaden fishery of the bay 112,919,925 pounds of fish, which netted the fishermen $368,570.

The equipment employed in taking these fisheries comprises 19 large steam vessels, 104 heavy tonnage motor vessels and 197 large sailing craft, together with 8,483 small motor boats (many of them engaged in tonging oysters in the tributaries) and 5,616 freight and other type vessels engaged in catching and transporting the sea food.

In addition to those catching the sea foods, there are employed in the packing houses and sea food establishments 11,423 persons. Thus the sea food industry of Chesapeake Bay contributes to the support of 82,970 person in the two states. The total yearly income in 1931 of all persons engaged in the several branches of the sea food industry of Chesapeake Bay was $10,230,380. With these figures before us, it is evident that the sea food industry is one of the most important of all the industries of Maryland and Virginia, and and with proper laws of conservation and regulatory measures to limit the number and the length of nets as well as to eliminate the more destructive types, this great resource of the Chesapeake may be preserved and increased. The annual production of salt-water fish of the bay totalled 73,492,160 pounds and yielded the fishermen $2,503,359.

In recent years anglers and sportsmen have found fishing in the commercial waters of our State very attractive. During the summer period, when the boats of the watermen are not engaged in oystering, the hiring of boats to sport fishermen has become a business of considerable importance and is a source of income to thousands of our citizens. An investigation made last year over the period of one week during the latter half of August, in Maryland waters, brought out the information that 9,735 persons engaged in sport fishing in our

State during this brief period. Another check-up was made during the first week in August this year, and the number of fishermen was found to be even greater; 11,126 persons fishing and 2,003 watermen employed in taking parties out to the fishing grounds.

Taking the sport-fishing season, which would cover a period of 8 weeks when it was at its height, the item of boat-hire alone would amount to $112,000, while 89,000 anglers would spend with the local boarding houses and inns approximately $500,000 during that period.

The State of Maryland operates fish hatcheries where the so-called "commercial" varieties of fish, such as white and yellow perch, pike, shad and herring, as well as crappie and large mouth black bass, are propagated and liberated into the waters of Chesapeake Bay by the millions every year.

In connection with this work the department is fortunate in having the cooperation of organizations similar to the Izaak Walton League and the Maryland State Game and Fish Protective Association, who not only are interested in the inland or game species of fish, but also the salt-water varieties and are most helpful in reporting violations and generally assisting the department in its work.

The Oyster Industry

The most important single fishery of the Chesapeake Bay is the oyster. In 1931, the production of this sea food totalled 41,187,299 pounds of oyster meats, with a value of $5,097,160 to the fishermen.

The survey of Maryland waters, not including the Potomac River, made under the provisions of the Haman Oyster Culture Act, between the years 1906 and 1912, gave the oyster producing or natural rock area, as it is called, as 215,000 acres. I figure that we have a water area in Chesapeake Bay of 1,472,000 acres; therefore, 14.6% was oyster producing upon the completion of the oyster survey.

From the early survey of the oyster area made by Lieutenant Francis Winslow, U. S. N., in 1878, covering waters of Tangier and Pocomoke Sounds, and extending into Virginia, it is clearly evident that thousands and tens of thousands of acres of oyster bottom now barren were once productive, and grew the fine quality of oysters for which our bay has been so famous.

The high peak of production in Maryland was reached in 1885, when the records show that over 15,000,000 bushels of oysters were marketed in Maryland. From my close contact with the oyster area of Maryland since the survey of 1906-12, I find there has been a shrinkage in the natural bar area of at least 75,000 acres. What I mean by shrinkage is that the oyster shells have been removed and in many places the oyster floor or rock has sunk and mud has taken the place of what was once a productive bar.

The State of Maryland has leased today to private oyster planters 8,711 acres of bottom. This leased area could be very materially enlarged to the interest of the industry, and especially to the people who depend upon this fishery for a livelihood. The lowest record of production in Maryland was reached in 1929, when 1,837,421 bushels were marketed.

Through shell planting operations, authorized by the Acts of 1927, the State has been able to purchase and plant on the depleted bars of the Chesapeake and its tributaries, approximately a million bushels of shells a year. Thus depletion has been stemmed and an increase of 300,000 bushels in the production was recorded in 1931. Last year, due to lack of demand and the closing of the banks, especially in tidewater Maryland and Virginia, the packers did not have the capital on which to operate, and the output was reduced. However, the oysters were not lost, because they remained on the bottoms for another year. There is no question that Maryland can materially aid her oyster production. The physical conditions in the bay are the same as in 1885, when the highest production was recorded, with the exception of certain areas near tidewater towns, which have been polluted by the dumping of waste and sewage. With these sections cleaned up by the installation of proper disposal systems, and with the sentiment in favor of private cultivation of barren and depleted oyster bottoms, there should be a marked increase in oyster production in our State. The Conservation Department is doing its utmost in this work, and in an effort to do it in accord with the latest scientific information and development, has established a marine laboratory at Solomons Island, where the life of the bay can be studied and experiments made.

The Blue Crab

The crab industry of Chesapeake Bay is third in importance of the water resources of the State. Like the fin fish, the crab

is migratory and must be conserved in the waters of both States. The yield from this fishery in 1931 was 65,671,362 pounds, which brought the fishermen $1,458,871.

Last year, before the U. S. Tariff Commission in Washington, there was a hearing brought about by the crab packers of Chesapeake Bay in their endeavor to have the Japanese, Korean and Russian crab meat more heavily taxed when imported into this country. It was found that the United States was importing about 10,000,000 pounds of crab meat in 1930, which was valued at $4,600,000. This imported crab meat is packed in hermetically-sealed cans, and as the commission ruled it was not in competition with the Chesapeake Bay product, which is sold as a fresh product, no additional duty was imposed.

Since the crab production of Chesapeake Bay represents about 70% of the entire United States' production, the failure to take advantage of the existing markets in the Middle Western States and thereby increase consumption rests with the crab packers of Virginia and Maryland. I am glad to be able to state that, due to the work of our sea food auditor, we have been able to point out to the crab packing interests the importance of securing a wider distribution, and it is believed that another season will see an increase in this direction to the benefit of the packers and watermen alike. With this in view, it is most important that Virginia and Maryland Cooperate to the fullest extent in preserving this valuable fishery for the citizens of both states. The life history of the blue crab shows that it mates in Maryland waters, then migrates to the capes in Virginia, where the female crab seeks the salt water to develop the eggs. After 9 months the eggs appear and are hatched out, and after a few sheddings, the young crab starts its northward migration to Maryland waters, where we must protect them until maturity, which covers a period of about two years. It is a most short-sighted policy for either state to fail to give the crab the fullest protection, in order that this region may hold its reputation as the crab-meat center of the Atlantic Coast.

With this great bay of 5,000 square miles extending through the heart of both states, it would seem that everything possible should be done to protect it from pollution and to increase its sea food production for its citizens. I do not fear an overproduction of sea food. The main trouble lies in the improper distribution of our sea food. We must see that

it is properly marketed and distributed in order that the man from the Middle West need not have to come to the East Coast for a sea food meal, but that a sea food meal may be carried directly to him in the same state of freshness and flavor to which we are accustomed to enjoy it, and so that he may know that he is getting a pure and healthful food.